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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,761	01/29/2007	Heinz-Peter Klein	EL2003/E009	6963
35157 7590 07/05/2007 NATIONAL STARCH AND CHEMICAL COMPANY P.O. BOX 6500 BRIDGEWATER, NJ 08807-3300			EXAMINER REDDY, KARUNA P	
			ART UNIT 1713	PAPER NUMBER
			MAIL DATE 07/05/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,761	Applicant(s) KLEIN ET. AL.	
	Examiner Karuna P. Reddy	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 3-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/8/2006</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claims 3-10 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only and/or cannot depend from any other multiple dependent claim. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-10 provides for the use of water-redispersible dispersion, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 1-10 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 5-8, 10-11 are rejected under 35 U.S.C. 102(a) as being anticipated by Weitzel (US 2003/0032711 A1).

Weitzel discloses the use of water-dispersible polymer powders based on protective colloid stabilized vinyl ester polymers in building adhesive compositions, wherein the vinyl ester polymers contain from 0.2 to 1.5 wt%, based on the overall weight of the vinyl ester polymers, of auxiliary monomer units derived from monomers having a higher water solubility than vinyl acetate (abstract). The protective colloids used are generally polyvinyl alcohols (paragraph 0002). Suitable auxiliary monomers are ethylenically unsaturated monocarboxylic and dicarboxylic acids and their anhydrides, ethylenically unsaturated sulfonic acids and their salts, preferably vinylsulfonic acid. Suitable vinyl esters are vinyl acetate (paragraph 0008). If desired the vinyl ester polymers may also contain further comonomers from the group of esters of acrylic and methacrylic acid. Suitable monoesters and diesters of ethylenically unsaturated dicarboxylic acids are the monoesters and diesters of fumaric acid

and maleic acid (paragraph 0009). If desired, from 0.05 to 10% by weight, based on the overall weight of the monomer mixture, of further functional comonomers may be copolymerized. Examples include silicon-functional comonomers such as acryloxypropyltri(alkoxy)silanes, methacryloxypropyltri(alkoxy) silane and vinyltrialkoxysilanes. Further examples are comonomers containing epoxide groups such as glycidyl (meth)acrylate (paragraph 0010).

Greatest preference is given to base polymers which also contain the water soluble auxiliary monomers and any functional comonomer units (paragraph 0011). Examples include vinyl ester-ethylene copolymers having an ethylene content of from 1 to 60% by weight (paragraph 0012), vinyl ester-ethylene-vinyl chloride copolymer (paragraph 0013), vinyl acetate copolymer with preferably from 1 to 50% by weight of one or more copolymerizable vinyl esters (paragraph 0014) and from 1 to 40% by weight of ethylene, vinyl ester-acrylic ester copolymers containing preferably from 1 to 60% by weight of acrylic ester (paragraph 015).

To produce the building adhesive, polymer powder is mixed with further formulation constituents such as cement, filler and other adjuvants (paragraph 0035). Typical cementitious building adhesive formulation contain from 5 to 80% by weight of cement, from 5 to 80% by weight of fillers, from 0.1 to 2% by weight of thickeners and from 0.5 to 60% by weight of the protective colloid stabilized polymer powders (paragraph 0036). The protective colloidal stabilized polymer

powders are suitable in the exterior insulation system adhesives for bonding polystyrene panels to facades (paragraph 0037).

Therefore, Weitzel anticipates the instant invention.

6. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Ball et al (US 6, 063, 865).

Ball et al disclose a powder composition which is redispersible in water and comprises water-insoluble polymers of ethylenically unsaturated monomers wherein 0.5 to 10% by weight of the monomers based on the total weight of polymer are ones having one or more substituents selected from the group consisting of aldehyde, keto, epoxide, carboxylic anhydride (column 2, lines 8-17). Suitable water-insoluble polymers comprise one or more units selected from the group consisting of vinyl esters of alkyl carboxylic acids, meth)acrylic esters, olefins such as ethylene, vinyl aromatics such as styrene (column 2, lines 29-37). Preferred vinyl esters are vinyl acetate (column 2, line 46), preferred (meth)acrylic esters are (meth)acrylate (column 2, lines 54-55), preferred esters groups for fumaric and maleic acids are methyl (column 2, lines 61-62).

The polymer can further comprise from 0.05 to 10.0% by weight of auxiliary monomers selected from the group consisting of ethylenically unsaturated monocarboxylic and dicarboxylic acids and their amides, ethylenically unsaturated sulfonic acids or their salts, preferably vinyl sulfonic acids, alkoxysilane functional monomer units such as acryloxypropyltri(alkoxy)silanes, methacryloxypropyltri(alkoxy) silane and

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vinyltrialkoxysilanes (column 2, lines 64-67; column 3, lines 1-10). Suitable monomers containing aldehyde and keto groups are acrolein, vinyl methyl ketone, allyl acetoacetate, vinyl acetoacetate and acetoacetylated hydroxyalkyl (meth)acrylates. Suitable monomers containing epoxy groups are glycidyl acrylate etc. (column 3, lines 37-42).

As water-insoluble polymers, preference is given to vinyl acetate-ethylene copolymers having an ethylene content of from 1 to 60% by weight; vinyl ester-ethylene-vinyl chloride copolymers having an ethylene content of from 1 to 40% by weight; vinyl acetate copolymers with from 1 to 50% by weight of one or more vinyl esters which may further comprise 1 to 40% by weight of ethylene; vinyl ester-acrylic ester copolymers comprising from 30 to 90% by weight of vinyl ester, 1 to 60% by weight of acrylic ester which may further comprise 1 to 40% by weight of ethylene; vinyl ester-acrylic ester copolymers comprising from 30 to 75% by weight of vinyl acetate, 1 to 30% by weight of acrylic ester which may further comprise 1 to 40% by weight of ethylene; vinyl ester copolymers with ester of maleic or fumaric acid, for example vinyl ester copolymers with from 10 to 60% by weight of maleic/fumaric ester; group consisting of styrene polymer such as styrene-butadiene copolymers and styrene-acrylic ester copolymers having a styrene content of from 1 to 70% by weight (column 3, lines 57-67; column 4, lines 7-50).

The preparation is preferably carried out in the presence of protective colloids (column 6, lines 19-20). Examples of applications are those in chemical

building products in combination with inorganic, hydraulic binders such as cement and knifing fillers and read on the thermal insulating systems. See example 1-3 wherein polyvinyl alcohol is used during polymerization process and reads on the protective colloid of claim 8.

Therefore, Ball et al anticipate the instant invention.

7. Claims 1, 5-9 and 11 are rejected under 35 U.S.C. 102(a) as being anticipated by Jodlbauer et al (US 2002/01623485 A1).

Jodlbauer et al disclose a cementitious dry mortar comprising from about 0.5 to 80% by weight of cement, 0 to 97% by weight of fillers, 0 to 3.5 % by weight of thickeners and from 1.0 to about 80% by weight of redispersible polymer powder (abstract). Water-redispersible polymer powders include those that are based on one or more monomers selected from vinyl esters, (meth)acrylic esters, vinyl aromatic, olefins, dienes and vinyl halides (paragraph 0020). Preferred vinyl esters are vinyl acetate; preferred (meth)acrylic esters are methyl (meth)acrylate; preferred vinyl aromatics are styrene; preferred olefins are ethylene (paragraph 0021). If desired, the polymers may also contain from 0.1 to 10% by weight based on the overall weight of the polymer, of functional comonomers. These functional comonomers include ethylenically unsaturated mono- or di-carboxylic acids, ethylenically unsaturated sulfonic acids and/or their salts such as vinyl sulfonic acid (paragraph 0022). Particularly preferred polymers are vinyl acetate-ethylene copolymers with an ethylene content of from 1 to 60% by weight; vinyl ester-ethylene-vinyl chloride copolymers with an

ethylene content of from 1 to 40% by weight; vinyl acetate copolymers which may contain from 1 to 40% by weight of ethylene; vinyl acetate-acrylic ester copolymers with from 1 to 60% by weight of acrylic ester (paragraph 0024). Styrene polymers such as styrene-butadiene copolymers and styrene acrylic ester copolymers, each with a styrene content of from 10 to 70% by weight (paragraph 0027). The dispersions used may be stabilized with a protective colloid such as polyvinyl alcohol (paragraph 0028). The cementitious mortar compounds obtainable in this way are suitable as adhesives for bonding insulating panels and soundproofing panels (paragraph 0040) which read on the thermal insulating systems and foam composite systems.

Therefore, Jodlbauer et al anticipate the instant invention.

8. Claims 1-8 and 11 are rejected under 35 U.S.C. 102(a) as being anticipated by Weitzel et al (US 2003/0065079 A1).

Weitzel discloses building materials containing copolymers derived from vinyl esters, (meth)acrylic esters and optionally ethylene comonomers, stabilized with a polyvinyl alcohol protective colloid, as their aqueous dispersions or as redispersible polymer powders. The vinyl ester component is polymerized optionally with ethylene in the first step and esters of (meth)acrylic acid are subsequently added (abstract). If desired, one or more monomers from the group of vinyl aromatics such as styrene and dienes such as 1,3-butadiene and acrylonitrile can be copolymerized with (meth)acrylic ester. If such monomers are copolymerized together with (meth)acrylic ester, they are present in a

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proportion of from 1 to 50% by weight (paragraph 0016). Suitable vinyl esters are vinyl acetate (paragraph 0017). If ethylene is copolymerized, it is preferably present in a proportion of from 1 to 40% by weight (paragraph 0018). If desired, from 0.05 to 10% by weight of auxiliary monomers can be additionally copolymerized. Examples of auxiliary monomers are ethylenically unsaturated mono and di-carboxylic acids, monoesters of fumaric and maleic acid, ethylenically unsaturated sulfonic acids or their salts such as vinyl sulfonic acid. Also suitable are epoxy-functional comonomers such as glycidyl methacrylate. Further examples are silicon containing monomers such as acryloxypropyltri(alkoxy)silanes, methacryloxypropyltri(alkoxy) silane and vinyltrialkoxysilanes. Mention may be made of monomers containing hydroxy or CO groups such as hydroxyethyl (meth)acrylate and diacetoneacrylamide (paragraph 0019).

The dispersions or powders are preferably used in cement-containing building adhesive formulations. Typical formulations comprise from 5 to 80% by weight of cement, from 5 to 80% by weight of fillers, 0.1 to 2% by weight of thickeners and from 0.1 to 60% by weight of the copolymers stabilized by protective colloids in the form of polymer dispersions or powders. The cement-containing building adhesive formulations are used as thermal insulating adhesives (paragraph 0043).

Therefore, Weitzel anticipates instant invention.

Conclusion

The "X" references (EP 1 238 958 A1 and EP 1 262 465 A2) from the international search report has been considered and used in the rejection.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karuna P. Reddy whose telephone number is (571) 272-6566.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Art Unit 1713

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